

**AMENDMENT IN THE NATURE OF A SUBSTITUTE**  
**TO H.R. 5358**  
**OFFERED BY MR. SCHWARZ OF MICHIGAN, MR.**  
**BOEHLERT OF NEW YORK, MR. GORDON OF**  
**TENNESSEE, AND MS. HOOLEY OF OREGON**

Strike all after the enacting clause and insert the following:

**1 SECTION 1. SHORT TITLE.**

2       This Act may be cited as the “Science and Mathe-  
3 matics Education for Competitiveness Act”.

**4 SEC. 2. FINDINGS.**

5       Congress finds the following:

6           (1) The National Science Foundation has made  
7       significant and valuable contributions to the im-  
8       provement of K–12 and undergraduate science, tech-  
9       nology, engineering, and mathematics education  
10      throughout its 56 year history.

11          (2) The National Science Foundation shall con-  
12      tinue to carry out the functions described in section  
13      3 of the National Science Foundation Act of 1950  
14      (42 U.S.C. 1862).



1 **SEC. 3. ROBERT NOYCE TEACHER SCHOLARSHIP PRO-**  
2 **GRAM.**

3 Section 10 of the National Science Foundation Au-  
4 thorization Act of 2002 (42 U.S.C. 1862n-1) is  
5 amended—

6 (1) by inserting “Teacher” after “Noyce” in  
7 the section heading and each place it appears in the  
8 text;

9 (2) in subsection (a)(1)—

10 (A) by striking “to provide scholarships,  
11 stipends, and programming designed”; and

12 (B) by inserting “and to provide scholar-  
13 ships and stipends to students participating in  
14 the program” after “science teachers”;

15 (3) in subsection (a)(3)(A)—

16 (A) by striking “encourage top college jun-  
17 iors and seniors” and inserting “recruit and  
18 prepare undergraduate students”; and

19 (B) by inserting “qualified as” after “to  
20 become”;

21 (4) in subsection (a)(3)(A)(ii)—

22 (A) by striking “programs to help scholar-  
23 ship recipients” and inserting “academic  
24 courses and early field teaching experiences de-  
25 signed to prepare students participating in the  
26 program”;



1 (B) by striking “programs that will result  
2 in” and inserting “such preparation as is nec-  
3 essary to meet requirements for”; and

4 (C) by striking “licensing; and” and insert-  
5 ing “licensing;”;

6 (5) in subsection (a)(3)(A)(iii)—

7 (A) by striking “scholarship recipients”  
8 and inserting “students participating in the  
9 program”;

10 (B) by striking “enable the recipients” and  
11 inserting “enable the students”; and

12 (C) by striking “;or” and inserting “;  
13 and”;

14 (6) in subsection (a)(3)(A) by inserting at the  
15 end the following new clause:

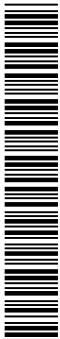
16 “(iv) providing summer internships  
17 for freshman and sophomore students par-  
18 ticipating in the program; or”;

19 (7) in subsection (a)(3)(B)—

20 (A) by striking “encourage” and inserting  
21 “recruit and prepare”; and

22 (B) by inserting “qualified as” after “to  
23 become”;

24 (8) by amending clause (ii) of subsection  
25 (a)(3)(B) to read as follows:



1 “(ii) offering academic courses and  
2 field teaching experiences designed to pre-  
3 pare stipend recipients to teach in elemen-  
4 tary schools and secondary schools, includ-  
5 ing such preparation as necessary to meet  
6 requirements for teacher certification or li-  
7 censing;”;

8 (9) in subsection (a) by inserting at the end the  
9 following new paragraph:

10 “(4) ELIGIBILITY REQUIREMENT.—To be eligi-  
11 ble for an award under this section, an institution  
12 of higher education (or consortia of such institu-  
13 tions) shall ensure that specific faculty members and  
14 staff from the institution’s mathematics, science, or  
15 engineering departments and specific education fac-  
16 ulty are designated to carry out the development and  
17 implementation of the program. An institution of  
18 higher education may also include teacher leaders to  
19 participate in developing the pedagogical content of  
20 the program and to supervise students participating  
21 in the program in their field teaching experiences.  
22 No institution of higher education shall be eligible  
23 for an award unless faculty from the institution’s  
24 mathematics, science, or engineering departments  
25 are active participants in the program.”;



1 (10) in subsection (b)(1)(A)—

2 (A) by striking “scholarship or stipend”;

3 (B) by inserting “and summer intern-  
4 ships” after “number of scholarships”; and

5 (C) by inserting “the type of activities pro-  
6 posed for the recruitment of students to the  
7 program,” after “intends to award,”;

8 (11) in subsection (b)(1)(B)—

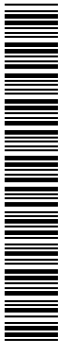
9 (A) by striking “scholarship or stipend”;  
10 and

11 (B) by striking “;and” and inserting “,  
12 which may include a description of any existing  
13 programs at the applicant’s institution that are  
14 targeted to the education of science and mathe-  
15 matics teachers and the number of teachers  
16 graduated annually from such programs;”;

17 (12) in subsection (b)(1), by striking subpara-  
18 graph (C) and inserting the following:

19 “(C) a description of the academic courses  
20 and field teaching experiences required under  
21 subsection (a)(3)(A)(ii) and (B)(ii), including—

22 “(i) a description of the under-  
23 graduate program that will enable a stu-  
24 dent to graduate in 4 years with a major  
25 in mathematics, science, or engineering



1 and to obtain teacher certification or li-  
2 censing;

3 “(ii) a description of the field teaching  
4 experiences proposed; and

5 “(iii) evidence of agreements between  
6 the applicant and the schools or school dis-  
7 tricts that are identified as the locations at  
8 which field teaching experiences will occur;

9 “(D) a description of the programs re-  
10 quired under subsection (a)(3)(A)(iii) and  
11 (B)(iii), including activities to assist new teach-  
12 ers in fulfilling their service requirements under  
13 this section; and

14 “(E) an identification of the applicant’s  
15 mathematics, science, or engineering faculty  
16 and its education faculty who will carry out the  
17 development and implementation of the pro-  
18 gram as required under subsection (a)(4).”;

19 (13) in subsection (b)(2)—

20 (A) by redesignating subparagraphs (B),  
21 (C), (D), and (E) as subparagraphs (C), (D),  
22 (E) and (F), respectively; and

23 (B) by inserting after subparagraph (A) a  
24 new subparagraph as follows:



1 “(B) the extent to which the applicant’s  
2 mathematics, science, or engineering faculty  
3 and its education faculty have worked or will  
4 work collaboratively to design new or revised  
5 curricula that recognizes the specialized peda-  
6 gogy required to teach mathematics and science  
7 effectively in elementary and secondary  
8 schools;”;

9 (14) in subsection (c)(3)—

10 (A) by striking “\$7,500” and inserting  
11 “\$10,000”; and

12 (B) by striking “of scholarship support”  
13 and inserting “of scholarship support, unless  
14 the Director establishes a policy by which part-  
15 time students may receive additional years of  
16 support”;

17 (15) in subsection (c)(4)—

18 (A) by inserting “, with a maximum serv-  
19 ice requirement of 4 years” after “was re-  
20 ceived”; and

21 (B) by striking “Service required under  
22 this paragraph shall be performed in a high-  
23 need local educational agency.”;

24 (16) in subsection (c), by adding at the end a  
25 new paragraph as follows:



1           “(5) EXCEPTION.—The period of service obliga-  
2           tion under paragraph (4) is reduced by 1 year for  
3           scholarship recipients whose service is performed in  
4           a high-need local educational agency.”;

5           (17) in subsection (d)(1), by striking “to re-  
6           ceive certification or licensing to teach” and insert-  
7           ing “established under subsection (a)(3)(B)”;

8           (18) in subsection (d)(2), by inserting “and  
9           professional achievement” after “academic merit”;

10          (19) in subsection (d)(3), by striking “1 year”  
11          and inserting “16 months”;

12          (20) in subsection (d)(4), by striking “for each  
13          year a stipend was received”;

14          (21) in subsection (g)(2)(A)—

15               (A) by striking “Treasurer of the United  
16               States,” and inserting “Treasurer of the United  
17               States.”; and

18               (B) by striking “multiplied by 2.”

19          (22) in subsection (i)(3), by inserting “or had  
20          a career in” after “is working in”; and

21          (23) by adding at the end the following:

22          “(j) SCIENCE AND MATHEMATICS SCHOLARSHIP  
23          GIFT FUND.—In accordance with section 11(f) of the Na-  
24          tional Science Foundation Act of 1950, the Director is au-  
25          thorized to accept donations from the private sector to





1 support scholarships, stipends, or internships associated  
2 with programs under this section.

3 “(k) AUTHORIZATION OF APPROPRIATIONS.—Except  
4 as provided in subsection (l), there are authorized to be  
5 appropriated to the Director for the Robert Noyce Teacher  
6 Scholarship Program—

7 “(1) \$50,000,000 for fiscal year 2007, of which  
8 at least \$7,500,000 shall be used for capacity build-  
9 ing activities described in subsection (a)(3)(A)(ii)  
10 and (iii) and (B)(ii) and (iii);

11 “(2) \$70,000,000 for fiscal year 2008, of which  
12 at least \$10,500,000 shall be used for capacity  
13 building activities described in subsection  
14 (a)(3)(A)(ii) and (iii) and (B)(ii) and (iii);

15 “(3) \$90,000,000 for fiscal year 2009, of which  
16 at least \$13,500,000 shall be used for capacity  
17 building activities described in subsection  
18 (a)(3)(A)(ii) and (iii) and (B)(ii) and (iii);

19 “(4) \$110,000,000 for fiscal year 2010, of  
20 which at least \$16,500,000 shall be used for capac-  
21 ity building activities described in subsection  
22 (a)(3)(A)(ii) and (iii) and (B)(ii) and (iii); and

23 “(5) \$130,000,000 for fiscal year 2011, of  
24 which at least \$19,500,000 shall be used for capac-



1       ity building activities described in subsection  
2       (a)(3)(A)(ii) and (iii) and (B)(ii) and (iii).

3       “(l) EXCEPTION.—For any fiscal year for which the  
4 funding allocated for activities under this section is less  
5 than \$50,000,000, the amount of funding available for ca-  
6 pacity building activities described in paragraphs (1)  
7 through (5) of subsection (k) shall not exceed 15 percent  
8 of the allocated funds.”.

9       **SEC. 4. SCHOOL AND UNIVERSITY PARTNERSHIPS FOR**  
10                                   **SCIENCE AND MATHEMATICS EDUCATION.**

11       (a) IN GENERAL.—Section 9 of the National Science  
12 Foundation Authorization Act of 2002 (42 U.S.C. 1862n)  
13 is amended—

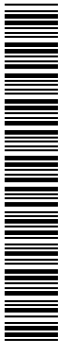
14               (1) in the section heading by striking “**MATHE-**  
15       **MATICS AND SCIENCE EDUCATION PARTNER-**  
16       **SHIPS**” and inserting “**SCHOOL AND UNIVERSITY**  
17       **PARTNERSHIPS FOR SCIENCE AND MATHE-**  
18       **MATICS EDUCATION**”;

19               (2) in subsection (a)(2)—

20                       (A) by striking “(A)”;

21                       (B) by striking subparagraph (B);

22                       (C) by inserting “, through 1 or more of  
23 its departments in science, mathematics, or en-  
24 gineering,” after “institution of higher edu-  
25 cation”; and



1 (D) by striking “a State educational agen-  
2 cy” and inserting “education faculty from the  
3 participating institution or institutions of high-  
4 er education, a State educational agency,”;

5 (3) in subsection (a)(3)(B) by—

6 (A) inserting “content-specific” before  
7 “professional development programs”;

8 (B) inserting “which are” before “de-  
9 signed”; and

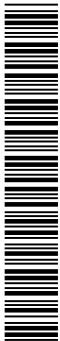
10 (C) inserting “and which may include  
11 teacher training activities to prepare science  
12 and mathematics teachers to teach Advanced  
13 Placement and International Baccalaureate  
14 science and mathematics courses” after “and  
15 science teachers”;

16 (4) in subsection (a)(3)(C) by inserting “and  
17 laboratory experiences” after “technology” and by  
18 inserting “and laboratory” after “provide technical”;

19 (5) in subsection (a)(3)(E) by striking “master  
20 teachers” and inserting “teacher leaders”;

21 (6) in subsection (a)(3)(I) by inserting “includ-  
22 ing model induction programs for teachers in their  
23 first 2 years of teaching,” after “and science,”;

24 (7) in subsection (a)(3)(K) by striking “devel-  
25 oping and offering mathematics or science enrich-



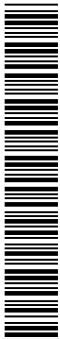
1       ment programs for students, including after-school  
2       and summer programs;” and inserting “developing  
3       educational programs and materials for use in and  
4       conducting mathematics or science enrichment pro-  
5       grams for students, including after-school programs  
6       and summer camps for students described in sub-  
7       section (b)(2)(G);”;

8               (8) in subsection (a)(4) by striking “master  
9       teachers” and inserting “teacher leaders” each place  
10      it appears;

11             (9) in subsection (a) by inserting at the end the  
12      following:

13             “(8) MASTER’S DEGREE PROGRAMS.—Activities  
14      carried out in accordance with paragraph (3)(B)  
15      shall include the development and offering of mas-  
16      ter’s degree programs for in-service mathematics  
17      and science teachers that will strengthen their sub-  
18      ject area knowledge and pedagogical skills. Grants  
19      provided under this section may be used to develop  
20      and implement courses of instruction for the mas-  
21      ter’s degree programs, which may involve online  
22      learning, and develop related educational materials.

23             “(9) MENTORS FOR ADVANCED PLACEMENT  
24      COURSES TEACHERS AND STUDENTS.—Partnerships  
25      carrying out activities to prepare science and mathe-



1        matics teachers to teach Advanced Placement and  
2        International Baccalaureate science and mathe-  
3        matics courses in accordance with paragraph (3)(B)  
4        shall encourage companies employing scientists,  
5        mathematicians, or engineers to provide mentors to  
6        teachers and students and provide for the coordina-  
7        tion of such mentoring activities.

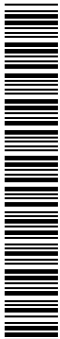
8            “(10) INVENTIVENESS.—Activities carried out  
9        in accordance with paragraph (3)(H) may include  
10       the development and dissemination of curriculum  
11       tools that will help foster inventiveness and innova-  
12       tion.”;

13           (10) in subsection (b)(2) by redesignating sub-  
14       paragraphs (E) and (F) as subparagraphs (F) and  
15       (G), respectively, and inserting after subparagraph  
16       (D) the following new subparagraph:

17            “(E) the extent to which the evaluation de-  
18       scribed in paragraph (1)(E) will be independent  
19       and based on objective measures;”;

20           (11) in subsection (b)(3)(A) by striking “and”  
21       at the end;

22           (12) in subsection (b)(3) by redesignating sub-  
23       paragraph (B) as subparagraph (C) and inserting  
24       after subparagraph (A) the following new subpara-  
25       graph:



1 “(B) give priority to applications that in-  
2 clude teacher training activities as the main  
3 focus of the proposal; and”;

4 (13) in subsection (b) by inserting at the end  
5 the following:

6 “(4) MINIMUM AND MAXIMUM GRANT SIZE.—A  
7 grant awarded under this section shall be not less  
8 than \$75,000 or greater than \$2,000,000 for any  
9 fiscal year.”;

10 (14) in subsection (c)—

11 (A) by striking paragraph (2);

12 (B) by redesignating paragraphs (3), (4),  
13 and (5) as paragraphs (4), (5), and (6), respec-  
14 tively; and

15 (C) by inserting after paragraph (1) the  
16 following new paragraphs:

17 “(2) REPORT ON MODEL PROJECTS.—The Di-  
18 rector shall determine which completed projects  
19 funded through the program under this section  
20 should be seen as models to be replicated on a more  
21 expansive basis at the State or national levels. Not  
22 later than 1 year after the date of enactment of this  
23 paragraph, the Director shall transmit a report de-  
24 scribing the results of this study to the Committee  
25 on Science and the Committee on Education and the



1 Workforce of the House of Representatives and to  
2 the Committee on Commerce, Science, and Trans-  
3 portation and the Committee on Health, Education,  
4 Labor, and Pensions of the Senate.

5 “(3) REPORT ON EVALUATIONS.—Not later  
6 than 4 years after the date of enactment of this  
7 paragraph, the Director shall transmit a report sum-  
8 marizing the evaluations required under subsection  
9 (b)(1)(E) of grants received under this program and  
10 describing any changes to the program recommended  
11 as a result of these evaluations to the Committee on  
12 Science and the Committee on Education and the  
13 Workforce of the House of Representatives and to  
14 the Committee on Commerce, Science, and Trans-  
15 portation and the Committee on Health, Education,  
16 Labor, and Pensions of the Senate. Such report  
17 shall be made widely available to the public.”; and

18 (15) by adding at the end the following new  
19 subsection:

20 “(d) DEFINITION.—In this section, the term ‘mathe-  
21 matics and science teacher’ means a mathematics, science,  
22 or technology teacher at the elementary school or sec-  
23 ondary school level.”.



1 (b) DEFINITIONS.—Section 4 of the National Science  
2 Foundation Authorization Act of 2002 (42 U.S.C. 1862n  
3 note) is amended—

4 (1) by amending paragraph (6) to read as fol-  
5 lows:

6 “(6) ELIGIBLE NONPROFIT ORGANIZATION.—  
7 The term ‘eligible nonprofit organization’ means a  
8 nonprofit organization, such as a museum or science  
9 center, involved in the preparation, training, or cer-  
10 tification of science and mathematics teachers.”;

11 (2) by amending paragraph (8) to read as fol-  
12 lows:

13 “(8) HIGH-NEED LOCAL EDUCATIONAL AGEN-  
14 CY.—The term ‘high-need local educational agency’  
15 means a local educational agency that—

16 “(A) is receiving grants under title I of the  
17 Elementary and Secondary Education Act of  
18 1965 (20 U.S.C. 6301 et seq) as a result of  
19 having within its jurisdiction concentrations of  
20 children from low income families; and

21 “(B) is experiencing a shortage of highly  
22 qualified teachers, as defined in section 9101 of  
23 the Elementary and Secondary Education Act  
24 of 1965 (20 U.S.C. 7801), in the fields of  
25 science, mathematics, or engineering.”; and





1           (3) in paragraph (11) by striking “master  
2       teacher” and inserting “teacher leader” each place it  
3       appears.

4       (c) AUTHORIZATION OF APPROPRIATIONS.—There  
5       are authorized to be appropriated to the Director of the  
6       National Science Foundation for the School and Univer-  
7       sity Partnerships for Science and Mathematics Education  
8       program—

9           (1) \$63,000,000 for fiscal year 2007;

10          (2) \$73,000,000 for fiscal year 2008;

11          (3) \$83,000,000 for fiscal year 2009;

12          (4) \$93,000,000 for fiscal year 2010; and

13          (5) \$103,000,000 for fiscal year 2011.

14       **SEC. 5. SCIENCE, TECHNOLOGY, ENGINEERING, AND MATH-**  
15                               **EMATICS TALENT EXPANSION PROGRAM.**

16       (a) AMENDMENTS.—Section 8(7) of the National  
17       Science Foundation Authorization Act of 2002 is  
18       amended—

19           (1) in subparagraph (A) by striking “competi-  
20       tive, merit-based” and all that follows through “in  
21       recent years” and inserting “competitive, merit-re-  
22       viewed multiyear grants for eligible applicants to im-  
23       prove undergraduate education in science, mathe-  
24       matics, engineering and technology through—

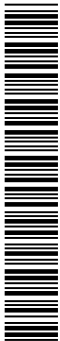


1 “(i) the creation of programs to in-  
2 crease the number of students studying to-  
3 ward and completing associate’s or bach-  
4 elor’s degrees in science, mathematics, en-  
5 gineering and technology, particularly in  
6 fields that have faced declining enrollment  
7 in recent years; and

8 “(ii) the creation of centers to develop  
9 undergraduate curriculum, teaching meth-  
10 ods for undergraduate courses, and meth-  
11 ods to better train professors and teaching  
12 assistants who teach undergraduate  
13 courses to increase the number of students  
14 completing undergraduate courses in  
15 science, mathematics, technology, and engi-  
16 neering, including the number of non-  
17 majors, and to improve student academic  
18 achievement in those courses.

19 Grants made under clause (ii) shall be awarded  
20 jointly through the Education and Human Re-  
21 sources Directorate and at least 1 research di-  
22 rectorate of the Foundation.”;

23 (2) in subparagraph (B) by striking “under this  
24 paragraph” and inserting “under subparagraph  
25 (A)(i)”;



1 (3) in subparagraph (C)—

2 (A) by inserting “(i)” before “The types  
3 of”;

4 (B) by redesignating clauses (i) through  
5 (vi) as subclauses (I) through (VI), respectively;

6 (C) by striking “under this paragraph”  
7 and inserting “under subparagraph (A)(i)”; and

8 (D) by adding at the end the following new  
9 clause:

10 “(ii) The types of activities the Foun-  
11 dation may support under subparagraph  
12 (A)(ii) include—

13 “(I) creating model curricula and  
14 laboratory programs;

15 “(II) developing and dem-  
16 onstrating research-based instruc-  
17 tional methods and technologies;

18 “(III) developing methods to  
19 train graduate students and faculty to  
20 be more effective teachers of under-  
21 graduates;

22 “(IV) conducting programs to  
23 disseminate curricula, instructional  
24 methods, or training methods to fac-



1                   ulty at the grantee institutions and at  
2                   other institutions;

3                   “(V) conducting assessments of  
4                   the effectiveness of the Center at ac-  
5                   complishing the goals described in  
6                   subparagraph (A)(ii); and

7                   “(VI) conducting any other ac-  
8                   tivities the Director determines will  
9                   accomplish the goals described in sub-  
10                  paragraph (A)(ii).”;

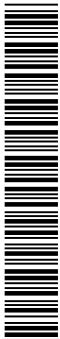
11               (4) in subparagraph (D)(i), by striking “under  
12               this paragraph” and inserting “under subparagraph  
13               (A)(i)”;

14               (5) in subparagraph (D)(ii), by striking “under  
15               this paragraph” and inserting “under subparagraph  
16               (A)(i)”;

17               (6) after subparagraph (D)(iii), by adding the  
18               following new clause:

19               “(iv) A grant under subparagraph (A)(ii) shall  
20               be awarded for 5 years, and the Director may extend  
21               such a grant for up to 2 additional 3 year periods.”;

22               (7) in subparagraph (E), by striking “under  
23               this paragraph” both places it appears and inserting  
24               “under subparagraph (A)(i)”;



1 (8) by redesignating subparagraph (F) as sub-  
2 paragraph (J); and

3 (9) by inserting after subparagraph (E) the fol-  
4 lowing new subparagraphs:

5 “(F) Grants awarded under subparagraph  
6 (A)(ii) shall be carried out by a department or de-  
7 partments of science, mathematics, or engineering at  
8 institutions of higher education (or a consortia  
9 thereof), which may partner with education faculty.  
10 Applications for awards under subparagraph (A)(ii)  
11 shall be submitted to the Director at such time, in  
12 such manner, and containing such information as  
13 the Director may require. At a minimum, the appli-  
14 cation shall include—

15 “(i) a description of the activities to be  
16 carried out by the Center;

17 “(ii) a plan for disseminating programs re-  
18 lated to the activities carried out by the Center  
19 to faculty at the grantee institution and at  
20 other institutions;

21 “(iii) an estimate of the number of faculty,  
22 graduate students (if any), and undergraduate  
23 students who will be affected by the activities  
24 carried out by the Center; and



1           “(iv) a plan for assessing the effectiveness  
2           of the Center at accomplishing the goals de-  
3           scribed in subparagraph (A)(ii).

4           “(G) in evaluating the applications submitted  
5           under subparagraph (F), the Director shall consider,  
6           at a minimum—

7           “(i) the ability of the applicant to effec-  
8           tively carry out the proposed activities, includ-  
9           ing the dissemination activities described in  
10          subparagraph (C)(ii)(IV); and

11          “(ii) the extent to which the faculty, staff,  
12          and administrators of the applicant institution  
13          are committed to improving undergraduate  
14          science, mathematics, and engineering edu-  
15          cation.

16          “(H) In awarding grants under subparagraph  
17          (A)(ii), the Director shall endeavor to ensure that a  
18          wide variety of science, mathematics, and engineer-  
19          ing fields and types of institutions of higher edu-  
20          cation, including 2-year colleges, are covered, and  
21          that—

22          “(i) at least 1 Center is housed at a Doc-  
23          toral/Research University as defined by the  
24          Carnegie Foundation for the Advancement of  
25          Teaching; and

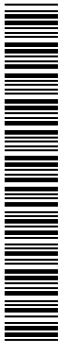


1                   “(ii) at least 1 Center is focused on im-  
2                   proving undergraduate education in an inter-  
3                   disciplinary area.

4                   “(I) The Director shall convene an annual  
5                   meeting of the awardees under this paragraph to  
6                   foster collaboration and to disseminate the results of  
7                   the Centers and the other activities funded under  
8                   this paragraph.”.

9                   (b) REPORT ON DATA COLLECTION.—Not later than  
10                  180 days after the date of enactment of this Act, the Di-  
11                  rector shall transmit to Congress a report on how the Di-  
12                  rector is determining whether current grant recipients in  
13                  the Science, Technology, Engineering, and Mathematics  
14                  Talent Expansion Program are making satisfactory  
15                  progress as required by section 8(7)(D)(ii) of the National  
16                  Science Foundation Authorization Act of 2002 and what  
17                  funding actions have been taken as a result of the Direc-  
18                  tor’s determinations.

19                  (c) AUTHORIZATION OF APPROPRIATIONS.—There  
20                  are authorized to be appropriated to the Director of the  
21                  National Science Foundation for the program described  
22                  in section 8(7) of the National Science Foundation Au-  
23                  thorization Act of 2002—



1 (1) \$44,000,000 for fiscal year 2007, of which  
2 \$4,000,000 shall be for the grants described in sub-  
3 paragraph (A)(ii);

4 (2) \$55,000,000 for fiscal year 2008, of which  
5 \$10,000,000 shall be for the grants described in  
6 subparagraph (A)(ii);

7 (3) \$60,000,000 for fiscal year 2009, of which  
8 \$10,000,000 shall be for the grants described in  
9 subparagraph (A)(ii);

10 (4) \$60,000,000 for fiscal year 2010, of which  
11 \$10,000,000 shall be for the grants described in  
12 subparagraph (A)(ii); and

13 (5) \$60,000,000 for fiscal year 2011, of which  
14 \$10,000,000 shall be for the grants described in  
15 subparagraph (A)(ii).

16 **SEC. 6. INTEGRATIVE GRADUATE EDUCATION AND RE-**  
17 **SEARCH TRAINEESHIP PROGRAM.**

18 (a) **FUNDING.**—For each of the fiscal years 2007  
19 through 2011, the Director of the National Science Foun-  
20 dation shall allocate at least 1.5 percent of funds appro-  
21 priated for Research and Related Activities to the Integra-  
22 tive Graduate Education and Research Traineeship pro-  
23 gram.

24 (b) **COORDINATION.**—The Director shall coordinate  
25 with Federal departments and agencies, as appropriate,





1 to expand the interdisciplinary nature of the Integrative  
2 Graduate Education and Research Traineeship program.

3 (c) **AUTHORITY TO ACCEPT FUNDS FROM OTHER**  
4 **AGENCIES.**—The Director is authorized to accept funds  
5 from other Federal departments and agencies to carry out  
6 the Integrative Graduate Education and Research  
7 Traineeship program.

8 **SEC. 7. CENTERS FOR RESEARCH ON LEARNING AND EDU-**  
9 **CATION IMPROVEMENT.**

10 The Director of the National Science Foundation  
11 shall continue to carry out the program of Centers for Re-  
12 search on Learning and Education Improvement as estab-  
13 lished in section 11 of the National Science Foundation  
14 Authorization Act of 2002 (42 U.S.C. 1862n–2).

15 **SEC. 8. UNDERGRADUATE EDUCATION PROGRAMS.**

16 The Director of the National Science Foundation  
17 shall continue to carry out programs in undergraduate  
18 education, including those authorized in section 17 of the  
19 National Science Foundation Authorization Act of 2002  
20 (42 U.S.C. 1862n–6). Funding for these programs shall  
21 increase as funding for the National Science Foundation  
22 grows.



1 **SEC. 9. EVALUATION OF PROFESSIONAL SCIENCE MAS-**  
2 **TERS.**

3 Not earlier than 1 year after the date of enactment  
4 of this Act, the Director of the National Science Founda-  
5 tion shall enter into an agreement with an appropriate  
6 party to assess the impact of the Professional Science  
7 Master's (PSM) degree at a variety of institutions, includ-  
8 ing the extent to which the degree is interdisciplinary and  
9 targeted to emerging fields, such as services sciences, the  
10 ability of graduates to obtain employment in industry rel-  
11 ative to those who receive traditional science master's de-  
12 grees, salary ranges for graduates relative to traditional  
13 science masters graduates, the extent to which the degree  
14 is terminal or graduates go on to continue their education,  
15 and the success of the degree in attracting traditionally  
16 underrepresented populations, including women and mi-  
17 norities. The results of such study, together with any rec-  
18 ommendations for Federal support for Professional  
19 Science Master's programs, shall be transmitted to the  
20 Congress not later than 3 years after the date of enact-  
21 ment of this Act.

22 **SEC. 10. REPORT ON BROADER IMPACTS CRITERION.**

23 Not later than 1 year after the date of enactment  
24 of this Act, the Director of the National Science Founda-  
25 tion shall transmit to Congress a report on the impact of



1 the broader impacts grant criterion used by the National  
2 Science Foundation. The report shall—

3 (1) identify the criteria that each division and  
4 directorate of the Foundation uses to evaluate the  
5 broader impacts aspects of research proposals;

6 (2) provide a breakdown of the types of activi-  
7 ties by division that awardees have proposed to carry  
8 out to meet the broader impacts criterion;

9 (3) provide any evaluations performed by the  
10 National Science Foundation to assess the degree to  
11 which the broader impacts aspects of research pro-  
12 posals were carried out and how effective they have  
13 been at meeting the goals described in the research  
14 proposals;

15 (4) describe what national goals, such as im-  
16 proving undergraduate science, mathematics, and  
17 engineering education, improving K–12 science and  
18 mathematics education, promoting university-indus-  
19 try collaboration and technology transfer, and broad-  
20 ening participation of underrepresented groups, the  
21 broader impacts criterion is best suited to promote;  
22 and

23 (5) describe what steps the National Science  
24 Foundation is taking and should take to use the



1 broader impacts criterion to improve undergraduate  
2 science, mathematics, and engineering education.

3 **SEC. 11. STUDY ON LABORATORY EQUIPMENT DONATIONS**  
4 **FOR SCHOOLS.**

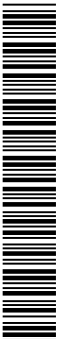
5 Not later than 2 years after the date of enactment  
6 of this Act, the Director of the National Science Founda-  
7 tion shall transmit a report to the Congress examining the  
8 extent to which institutions of higher education are donat-  
9 ing used laboratory equipment to elementary and sec-  
10 ondary schools. The Director, in consultation with the Sec-  
11 retary of Education, shall survey institutions of higher  
12 education to determine—

13 (1) how often, how much, and what type of  
14 equipment is donated;

15 (2) what criteria or guidelines the institutions  
16 are using to determine what types of equipment can  
17 be donated, what condition the equipment should be  
18 in, and which schools receive the equipment;

19 (3) whether the institutions provide any support  
20 to, or follow-up with the schools; and

21 (4) how appropriate donations can be encour-  
22 aged.



1 **SEC. 12. ASSESSMENTS OF NATIONAL SCIENCE FOUNDA-**  
2 **TION EDUCATION PROGRAMS.**

3 In conducting assessments of National Science Foun-  
4 dation education programs, the Director shall use assess-  
5 ment methods that allow Foundation programs to be com-  
6 pared to education programs supported by other Federal  
7 agencies.

8 **SEC. 13. EDUCATION PROGRAMS AT THE DEPARTMENT OF**  
9 **ENERGY.**

10 (a) AUTHORIZATION OF EDUCATION PROGRAMS.—  
11 The Secretary of Energy, acting through the Office of  
12 Science, shall carry out education programs and activities  
13 in fields related to the Office of Science's mission, which  
14 may include awarding scholarships or fellowships for study  
15 and research, providing research experiences at National  
16 Laboratories for undergraduates, and operating summer  
17 institutes to improve the content knowledge of science and  
18 mathematics teachers.

19 (b) INVENTORY AND EVALUATION.—

20 (1) REPORT.—Not later than 1 year after the  
21 date of enactment of this Act, the Secretary of En-  
22 ergy shall transmit a report to the Congress which  
23 shall contain—

24 (A) an inventory of existing education pro-  
25 grams and activities at the Department and at  
26 the National Laboratories, which shall include a



1 description of each education program or activ-  
2 ity supported by the Department or the Na-  
3 tional Laboratories, a description of the in-  
4 tended beneficiaries, and the amount of Federal  
5 funding used to support it; and

6 (B) a schedule for conducting independent  
7 evaluations of the education programs and ac-  
8 tivities identified under subparagraph (A) to as-  
9 sess the impact of such programs and activities  
10 on the intended beneficiaries and the larger  
11 mission of the Office of Science that shall result  
12 in all evaluations of the programs being com-  
13 pleted not later than 4 years after the date of  
14 enactment of this Act.

15 (2) IMPLEMENTATION OF SCHEDULE.—The  
16 Secretary shall implement the schedule provided  
17 under paragraph (1)(B) and shall transmit each  
18 evaluation to the Congress as it is completed, along  
19 with a description of any actions the Secretary in-  
20 tends to take as a result of the evaluation.

21 (c) NATIONAL LABORATORIES.—The Secretary shall  
22 include the conduct of education programs at the National  
23 Laboratories and the results of any evaluations of such  
24 programs as a factor in the annual setting of the perform-



1    ance and other incentive fees for a National Laboratories  
2    management and operations contractor.

3    **SEC. 14. DEFINITIONS.**

4       In this Act—

- 5           (1) the term “institution of higher education”  
6       has the meaning given such term in section 101(a)  
7       of the Higher Education Act of 1965 (20 U.S.C.  
8       1001(a)); and
- 9           (2) the term “National Laboratory” has the  
10      meaning given the term “nonmilitary energy labora-  
11      tory” in section 903(3) of the Energy Policy Act of  
12      2005 (42 U.S.C. 16182(3)).

